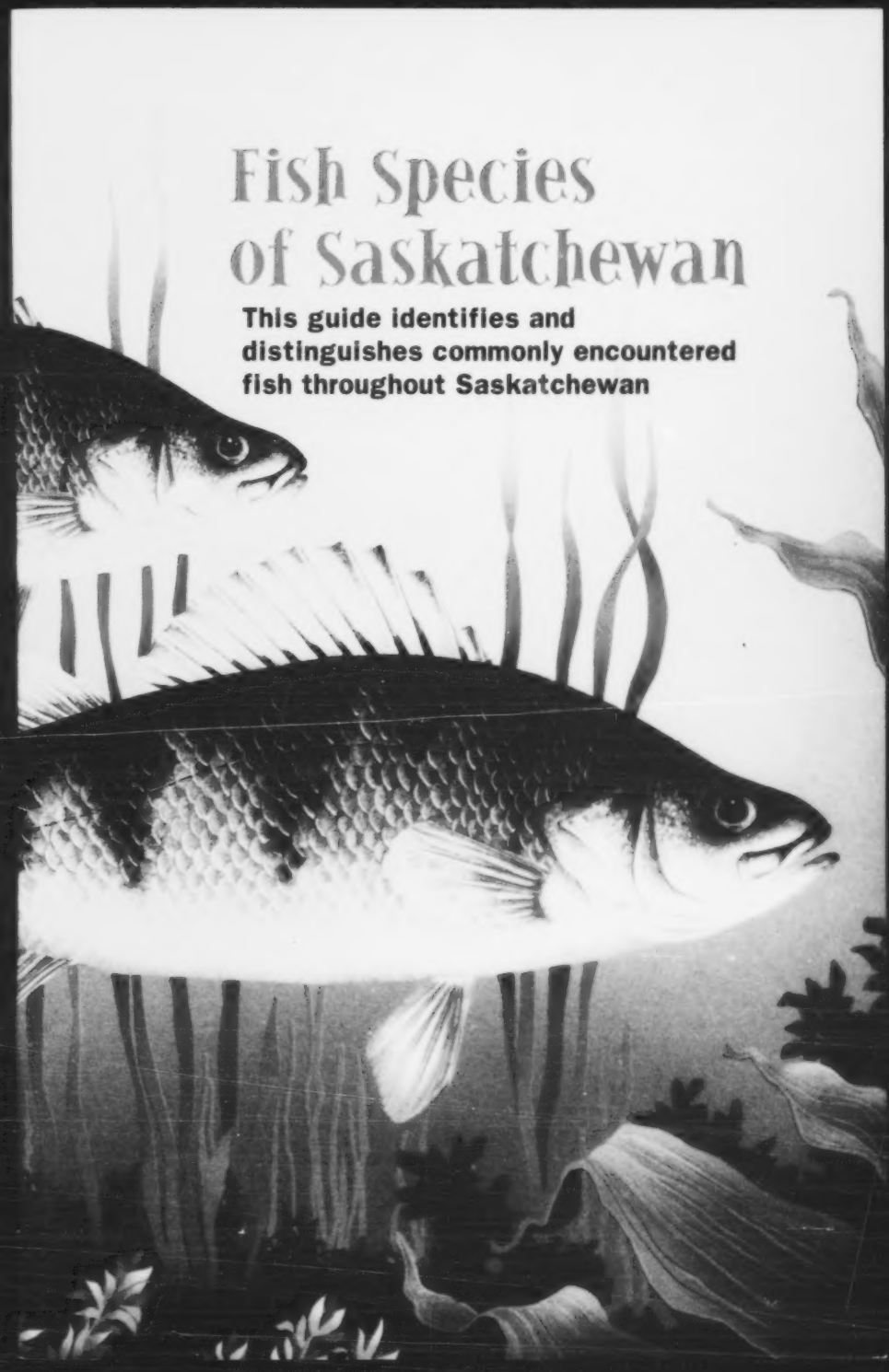
Fish Species of Saskatchewan

This guide identifies and distinguishes commonly encountered fish throughout Saskatchewan



Introduction

From the shallow, nutrient-rich potholes of the prairies to the clear, cool rock-lined waters of our province's north, Saskatchewan can boast over 50,000 fish-bearing bodies of water. Indeed, water accounts for about one-eighth, or 80,000 square kilometers, of this province's total surface area.

As numerous and varied as these waterbodies are, so too are the types of fish that inhabit them. In total, Saskatchewan is home to 67 different fish species from 16 separate taxonomic families. Of these 67, 58 are native to Saskatchewan while the remaining nine represent species that have either been introduced to our waters or have naturally extended their range into the province.

Approximately one-third of the fish species found within Saskatchewan can be classed as sportfish. These are the fish commonly sought out by anglers and are the best known. The remaining two-thirds can be grouped as minnow or rough-fish species.

The focus of this booklet is primarily on the sportfish of Saskatchewan, but it also includes information about several rough-fish species as well. Descriptions provide information regarding the appearance of particular fish as well as habitat preferences and spawning and feeding behaviours. The individual species range maps are subject to change due to natural range extensions and recessions or because of changes in fisheries management.

"...I shall stay him no longer than to wish him a rainy evening to read this following Discourse; and that, if he be an honest Angler, the east wind may never blow when he goes a-fishing."

The Compleat Angler
Izaac Walton, 1593-1683

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For further information, please contact the Saskatchewan Watershed Authority, Saskatchewan Environments' Fish and Wildlife Branch or any of the local Saskatchewan Environment field offices listed in the Saskatchewan Anglers' Guide.

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Walleye *Stizostedion vitreum*

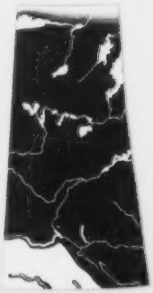
Distinguishing features • Dark blotch present along rear base of first dorsal fin • White spot on lower lobe of caudal fin • No scales on cheeks

Description Walleye are a moderately large and full-bodied fish. As in all members of the perch family, walleye have two distinct dorsal fins with the first being spiny-rayed and the second, soft-rayed. Their eyes possess a silvery reflective quality making them appear blind or 'wall-eyed'. These specially adapted eyes enable them to prey in low light conditions. Typical sizes range from 0.5 to 2 kg but fish over 4 kg are not uncommon.

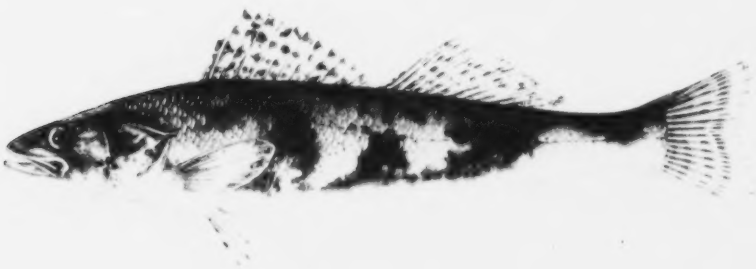
Habitat Walleye can be found in lakes, reservoirs and rivers throughout the province although they are generally most successful in large, shallow, moderately turbid lakes. Walleye tend to favour mid-depth areas to 15 meters, typically ranging in the near-shore shallows during low-light conditions.

Spawning Walleye spawn annually in May within the moderately flowing areas of gravel and cobble-lined streams, or over coarse gravel shoals within lakes. Eggs are broadcast over the substrate and once hatched the offspring must fend for themselves.

Feeding Anglers have long known that walleye tend to feed most aggressively during the dwindling light conditions of dawn and dusk. During these periods of the day, walleye have a distinct feeding advantage over their prey due to their highly developed vision. Walleye forage on other fish, and the yellow perch is an important prey species of many walleye populations.



Sauger *Stizostedion canadense*



Distinguishing features
- Rows of spots on dorsal fin
- Blotchy appearance
- Scales present on cheeks

Description Sauger are a moderately large, elongate fish and very similar in appearance to the closely related walleye. Sauger are typically a dull, brassy colour punctuated with roundish dark blotches along the back and flanks. Rows of radiating spots are present in the spiny-rayed first and soft-rayed second dorsal fins. Sauger generally grow to lengths of 25 to 40 cm and can weigh up to 2 kg.

Habitat In Saskatchewan, sauger inhabit only the larger lakes, reservoirs and major river systems such as the Churchill, the North and South Saskatchewan and Qu'Appelle drainage basins. They tend to prefer large, shallow lakes or large, slow flowing rivers with turbid waters. In highly turbid waterbodies, sauger tend to out-compete walleye for available food.

Spawning Sauger spawn in May immediately following the spawning of the walleye. They spawn at night in moderately shallow water, broadcasting their eggs over coarse gravel shoals.

Feeding Sauger share the walleye's highly developed sense of vision which is especially adapted to low-light conditions. They tend to feed most actively during periods of low light as such conditions provide them a considerable advantage over their prey. Although their diet consists mainly of minnows and other forage fish, sauger will also consume aquatic invertebrates such as insects, leeches or crayfish.

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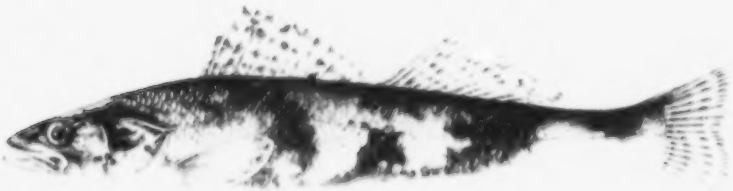

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Yellow perch *Perca flavescens*

Distinguishing features
- Spiny-rayed first dorsal fin
- Two spines on the leading edge of the anal fin.

Description Perch are a moderately narrow and deep-bodied fish. They have two distinctly separate dorsal fins, the first being spiny-rayed and the second, soft-rayed. The overall golden colour of this fish is broken up along the flanks by seven vertical, tapering olive-green bars. The top surface of the head is also olive-green and the belly, a milky white colour. Perch grow to lengths of 10 to 25 cm and do not commonly attain weights in excess of 450 g.

Habitat This native panfish is found throughout the province, commonly in lakes and reservoirs and in some large rivers. They favour habitats offering clear water and moderate amounts of aquatic vegetation. Perch tend to school in numbers from 50-200 individuals throughout the day, but disperse from these groups in the evening to rest alone and motionless on the bottom.

Spawning Perch spawn in the spring around the end of April. Females release their eggs within a long, accordion-like tube. These sticky strings of eggs will attach and incubate on flooded near-shore vegetation. Such 'egg-strings' can measure up to 2 meters in length, weigh nearly 1 kg and contain from 2,000 - 90,000 eggs.

Feeding The diet of perch less than 15 cm in length tends to be dominated by aquatic invertebrates such as immature mayflies, dragonflies, midges and small crustaceans. Perch in excess of 15 cm feed most extensively on crayfish, small fish and dragonfly nymphs. Perch feed during the daylight hours only.

The fine eating quality of the yellow perch is widely known and is often the favourite of young anglers.

Northern pike *Esox lucius*

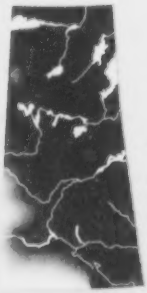
Distinguishing features
- Large, tooth-filled mouth
- Dorsal fin positioned close to caudal fin

Description Generally, pike are green to brown in overall colour with milky-white bellies. Their flanks have white, bean-shaped spots extending from the gill cover to the base of the caudal fin. The large head of this fish is filled with numerous razor-sharp teeth. It is not uncommon for pike in Saskatchewan to attain lengths in excess of 100 cm and weigh over 9 kg.

Habitat This native gamefish is found throughout the province and usually in abundant numbers. Ideally, pike prefer large, slow-moving, heavily vegetated rivers or the warm, weedy bays of lakes. Pike are generally found within the top five meters of a waterbody, especially in the spring and fall. During summer, pike will seek out cooler, deeper waters.

Spawning Pike spawn early in April during the first signs of spring break-up. Their sticky eggs are broadcast in small numbers over flooded grasses or submerged vegetation upon which they remain and incubate.

Feeding Besides different forage or gamefish, pike will also consume aquatic invertebrates such as leeches, crayfish and freshwater shrimp. Small birds and mammals such as mice, muskrats and ducklings have also been known to frequent the diet of pike. Although fish dominate their diet, pike will eat anything they can fit into their mouths.



The Latin name for pike translates as "water wolf", a fitting name for a fish who often stalks and ambushes its prey.

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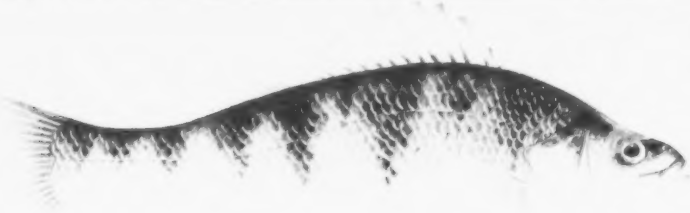

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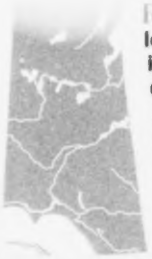

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Brook trout *Salvelinus fontinalis*

Distinguishing features
- **'Worm-like' markings along back**
- **White leading edge on lower fins**

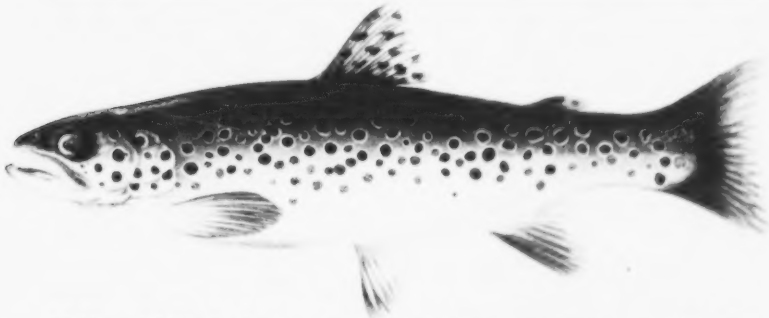
Description **Similar to the lake trout, the brook trout are also chars and show a white leading edge on lower fins. However, brook trout show vibrant colour with red body spots surrounded by blue halos. Their colour can be especially bright during the fall spawn, when the underside of the males becomes orange or red. Stream populations of brook trout rarely exceed 500 g in Saskatchewan, but lake populations are known to attain a weight of 2 kg .**

Habitat **Managed mostly through stocking, brook trout require cool, clear, well-oxygenated waters to survive. In lake environments, brook trout often seek out cooler, deeper waters; while they tend to favour cool headwater reaches and especially flooded beaver ponds in streams.**

Spawning **Brook trout spawn in late-fall once water temperatures cool sufficiently. Brookies seek out stream sections with consistent water flow and a silt-free, gravel bottom. Eggs are deposited into a nest, or 'redd' to incubate throughout the winter. Brook trout have been known to spawn in lakes where there are near-shore spring inflows and suitable substrate available.**

Feeding **Both adult and larval insects remain very important to the diet of the brook trout throughout their lives. Brook trout will also eat worms, leeches, clams, snails, frogs, crayfish and other fish species.**

Brown trout *Salmo trutta*



Distinguishing features • **Square caudal fin • No spots on caudal fin**

Description **Similar in shape and appearance to other trout, brown trout have pronounced black spots on their back and red or orange spots with pale borders on their flanks. Brown trout can be distinguished from other trout by their non-spotted, square caudal fin.**

Habitat **Managed in Saskatchewan primarily through stocking, brown trout can successfully survive in both stream and lake environments. In rivers, browns will typically inhabit the deeper and slower moving water. In lakes, they will often move into shallow water to feed, especially during low light conditions, but will spend the majority of the day in deeper, cooler water.**

Spawning **Brown trout spawn in late-fall to early-winter. Females will initially prepare a nest called a 'redd' in the clean, gravelly substrate of a stream. Once joined by the male, eggs and milt are discharged over the redd. The female will often guard the nest from predators for a period of days, but the young fry will not emerge from the redd until the following spring.**

Feeding **As juveniles, the diet of the brown trout is composed mainly of insects and other small aquatic invertebrates. As they mature, the adult brown trout's diet shifts towards larger prey items such as fish and crayfish; although, they will continue to consume large amounts of both larval and mature insects throughout their lives. Brown trout commonly feed actively after dark.**

Two different strains of brown trout were originally stocked in streams of the Cypress Hills. One variety came from Scotland and the other from Germany. Descendants of those fish continue to reproduce in Bone Creek and Conglomerate Creek in southwest Saskatchewan.

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Lake trout *Salvelinus namaycush*

Distinguishing features
- White leading edge on lower fins
- Deeply forked caudal fin

Description The largest member of the trout family in Saskatchewan, the lake trout can grow to achieve weights in excess of 20 kg (45 lbs). Lake trout are actually not 'true' trout, but chars. They can be distinguished by the light spots that fleck their dark bodies and the white leading edge on their lower fins.

Habitat Unlike most of the other members of the trout family found in Saskatchewan, lake trout are native to this province. They require large, clear, cold, deep lakes to survive. Throughout the warm summer months, lake trout will only be found in the cool waters below the lake's thermocline. During spring and fall, waters are well mixed and no thermocline exists, lake trout will range throughout the lake including shallow near-shore areas.

Spawning Lake trout spawn in late-fall. Females will broadcast their eggs over shallow, wind-swept rocky shoals. The fertilized eggs settle down in-between the rocks to incubate. The fingerlings emerge in the spring at the same time as the first blooms of zooplankton, providing them ample nourishment.

Feeding Juvenile lake trout tend to feed on larval insects and other aquatic invertebrates. As the lake trout matures, fish become more important to the diet. When a body of water has an abundant fish population, these fish will make up a big part of the trout's diet.

For anglers who enjoy fishing the cold, crystal clear lakes of the far north, the lake trout is indeed a prize to behold.

Splake *Hybrid-Lake trout x Brook trout*

Distinguishing features
- **Modestly forked caudal fin**
- **Faint worm-like markings**

Description **Many of the splake's physical traits appear as a compromise between its parent species: the brook and lake trout. For instance, the caudal fin of the splake is more deeply forked than the brook trout but less than the lake trout. The vivid, worm-like markings found in brook trout are also present in splake, but appear faded or faint. Maximum size for splake is approximately 2 kg, which has more similarity to the brook trout than to the large sizes lake trout are known to attain.**

Habitat **Splake are managed in Saskatchewan through the stocking of small, deep lakes within mainly the central part of the province. Splake tend to favour cool, deeper waters, although not to the degree of their lake trout parents.**

Spawning **Although most hybrids are not able to reproduce, splake are capable of successfully spawning in near-shore areas with clean, coarse substrate and flowing springs of cool, well-oxygenated water. No populations within Saskatchewan are presently known to reproduce.**

Feeding **Juvenile splake tend to feed mainly on insect life such as dragonflies, mayflies, caddisflies and stoneflies. As splake increase in size they begin to feed more on fish and less on insects and other invertebrates.**

The hybrid is produced in a somewhat strange manner, often using the eggs of a very large female lake trout and fertilizing them with milt from a very tiny male brook trout.

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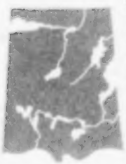

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Tiger trout *Hybrid-Brown trout x Brook trout*

Distinguishing features
- **Dark zig-zag markings**
- **White leading edge on lower fins**

Description **Unlike the splake which seems to somewhat resemble each of its parental species, the tiger trout appears quite unique in appearance. Bold, zigzag-like markings appear along the flanks of the fish giving it a striped appearance and providing the basis for its name. The body form of the tiger trout is consistent with others of the trout and salmon family. Tiger trout typically attain sizes of 0.5 to 1 kg, but fish of over 2 kg are taken annually.**

Habitat **Tiger trout are managed in only a small number of lakes in Saskatchewan. Within these lakes, they tend to occupy the upper or mid-water depths. Most of the waters managed with tiger trout occur within the central part of the province.**

Spawning **This hybrid is not able to reproduce. Eggs of a brown trout are fertilized with brook trout milt to create tiger trout offspring. The fertilized eggs are then placed within specially designed incubators for several weeks until they are free-swimming and beginning to feed. This procedure is performed in a hatchery setting.**

Feeding **Tiger trout tend to feed primarily on insects and other aquatic invertebrates such as leeches and freshwater shrimp. They will also feed on fish although to a more limited extent.**

'Tiger' is a suitable descriptor for not only the appearance of this species but also its ravenous appetite and aggressiveness when taking a hook.

Rainbow trout *Oncorhynchus mykiss*

Distinguishing features • Reddish band along flank and gill cover

Description The rainbow trout is quite similar in size and appearance to other members of the trout and salmon family. Rainbows generally average between 0.5 to 2 kg in Saskatchewan, but can weigh in excess of 4 kg. A close cousin of the rainbow is the cutthroat trout, and like its name suggests it can be distinguished by the bright slash found under the jaw.

Habitat Although originally native to the western slopes of the Rocky Mountains, rainbow trout have been widely introduced throughout Saskatchewan. Primarily a lake fish, they tend to occupy the upper and mid-water areas within lake and reservoir environments. In streams, rainbows favour areas of moderate flows and currents.

Spawning Rainbows spawn annually in early spring. Eggs are deposited within nests called 'redds', which are prepared by the female in the coarse, gravel substrate. Large amounts of cool, swiftly flowing water are required to provide adequate oxygen to the incubating eggs. Natural reproduction has only ever been verified in tributaries to Diefenbaker Lake and Battle Creek.

Feeding Throughout its life, the bulk of the rainbow trout's diet is composed of insects including mayflies, caddisflies, stoneflies, midges and dragonflies. Other invertebrates such as leeches, crayfish, freshwater shrimp and grasshoppers are also important to the diet of the adult rainbow trout. Larger rainbow trout will commonly feed heavily upon minnows and other forage fish if they are present.

Rainbows are the most popular of Saskatchewan's trouts. They continue to be stocked for private aquaculture in smaller predator-free lakes.

Rainbow trout *Oncorhynchus mykiss*

Distinguishing features - Reddish band along flank and gill cover

Description The rainbow trout is quite similar in size and appearance to other members of the trout and salmon family. Rainbows generally average between 0.5 to 2 kg in Saskatchewan, but can weigh in excess of 4 kg. A close cousin of the rainbow is the cutthroat trout, and like its name suggests it can be distinguished by the bright slash found under the jaw.

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Arctic grayling *Thymallus arcticus*

Distinguishing features

- **Tip of dorsal fin of a male grayling extends nearly to adipose fin**
- **Pelvic fins are crossed on an angle by wavy mauve or orange lines**

Description **Grayling are closely related to and share a similar body shape with members of the trout family. The overall colouration of the grayling can be fairly variable, ranging from steel-gray to a dull-rust. The dorsal and pelvic fins of this fish are very colourful. Grayling will usually grow to an average length of 30 to 38 cm.**

Habitat **Grayling are native to Saskatchewan and reside only in the large, northern rivers and lakes of the Canadian Shield. They are very sensitive to pollution and disturbances to their habitat.**

Spawning **Arctic grayling spawn during the spring break-up of the northern creeks and streams. Adults migrate into small, rocky, feeder creeks from their wintering areas in large rivers and lakes to spawn. No nest is prepared. Eggs are broadcast over the clean, gravelly or rocky substrate, settling in-between the rocks to incubate.**

Feeding **Insects such as mayflies, caddisflies, midges and grasshoppers in both the immature and adult stages, comprise the bulk of the grayling's diet. They will also prey upon fish but this feeding characteristic is not as common.**

In colour and shape, the grayling is one of the most attractive of Saskatchewan's fish, but don't be fooled by their appearance. Anglers can attest to their spirited attacks to an offered fly or spinner.

Arctic grayling *Thymallus arcticus*

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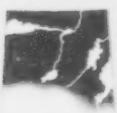

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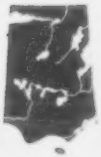
Lake whitefish *Coregonus clupeaformis*

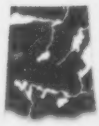
Distinguishing features
- Mouth is located below the tip of the snout



Description Both whitefish and cisco have slender bodies with small heads. Lake whitefish tend to be about one third larger than cisco, and develop a distinct hump behind the head. Both have an overall silvery colouration with the upper surfaces appearing brown or greenish. Each has large rounded scales.

Habitat Whitefish and cisco are cool water species and are widely distributed throughout deep northern lakes. In southern waters, they move from the shallows to deeper cooler areas in the summer months. They also inhabit several of the province's larger river systems and commonly migrate great distances in early spring.

Spawning In late fall prior to freeze up, whitefish and cisco move to near-shore shoals and deposit their eggs over gravel and sand. Incubation takes place over the winter and hatching commences shortly after ice break-up.



Feeding Cisco tend to feed primarily on zooplankton and small insects within the water column while whitefish are mainly bottom feeders; consuming a variety of invertebrates and the occasional small fish.

Cisco *Coregonus artedi*

Distinguishing features
- Upward-turned mouth is located at the tip of the snout

Goldeye *Hiodon alosoides*

Distinguishing features • **Leading edge of the dorsal fin is positioned directly above the anal fin**

Description **Goldeye and mooneye have very large bright yellow eyes. Their silvery bodies are deep and thin, tapering to the belly. Both species usually grow to weigh less than 1 kg.**

Habitat **Both species are adapted to large river systems. Man-made barriers have tended to interfere with natural migration patterns and in turn limited the range of both species. Increased siltation in our river systems may have decreased population levels of the less tolerant mooneye.**

Spawning **During the spawning period of late-May to mid-July, both goldeye and mooneye seek out pools in turbid rivers or flooded backwater ponds. Eggs are released and incubate while suspended in the water column.**

Feeding **The diet of both species is primarily composed of zooplankton, aquatic insects and other invertebrates such as molluscs and crayfish. Peak feeding activity typically occurs during sunrise and sunset.**

Mooneye *Hiodon tergisus*

Distinguishing features • **Leading edge of the dorsal fin is located ahead of the anal fin**

White sucker *Catostomus commersoni*

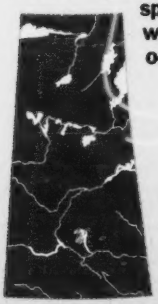
Distinguishing features • Sucker-like mouth with large lips and no teeth • No spines on fins, no barbels and no adipose fin • Caudal fin deeply forked

Description The white sucker is a deep-bodied, torpedo-shaped fish. In adults the back and upper body ranges from a dark coppery-brown to a light or creamy-white belly. Adult spawners in the spring of the year are much darker and more golden coloured.

Habitat This bottom-oriented species prefers the warm, shallow areas of lakes at depths of between 5 to 10 meters. White sucker are quite tolerant of poorer water quality and can live in lakes where most other fish species cannot survive.

Spawning Spawners migrate during early spring from lakes into tributary streams, selecting spawning sites with suitable water flows and gravel or sand substrates. In some populations, lake spawning is also common with sites selected over near-shore shoals of sand and gravel.

Feeding The position of the sucker's mouth enables it to swim in a sharply pointed downward angle while feeding. They feed not only by sight, but also by touch and taste, eating hundreds of species of bottom growing plants and animals as well as suspended plankton. Peak feeding activity occurs in shallow water during sunrise and sunset.



Of all Saskatchewan fish, the white sucker is the most abundant and widespread.

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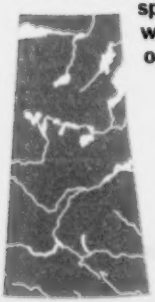

Of all Saskatchewan fish, the white sucker is the most abundant and widespread.

Shorthead redhorse *Moxostoma macrolepidotum*

Distinguishing features
- Thick soft lips
- Caudal and anal fins orange to bright red in colour

Description The shorthead redhorse is a moderately large and stout fish. Less cylindrical than other suckers, they are somewhat narrowed and deep-bodied. Its toothless, sucking mouth is located beneath its long snout and surrounded by thick, extendable lips. Typically, these fish are olive-brown along the head and back blending into a creamy white belly. The caudal and anal fins of this species are generally orange to bright red in colour.

Habitat The shorthead redhorse is native to the major rivers and select lakes of the Missouri, Qu'Appelle, Winnipegosis, Saskatchewan and Churchill Basins within southern and north-central Saskatchewan. They are fairly sensitive to poor water quality and favour areas of clear, shallow water with sand or gravel bottoms.

Spawning Shorthead redhorse suckers spawn annually in mid-spring migrating from resident waterbodies up into smaller streams and rivers. Eggs are broadcast by the female over gravel-bottomed riffle areas. No nest is prepared and the offspring, once hatched, must fend for themselves.

Feeding As in other suckers, the shorthead redhorse feeds by sucking up bottom materials and straining them for food. The diet of this fish consists almost entirely of the immature stages of such insects as mayflies, caddisflies, craneflies and midges as well as various crustaceans, leeches, molluscs and aquatic worms.

Longnose sucker *Catostomus catostomus*

Distinguishing features
- Long snout with fleshy lips
- All fins are soft-rayed

Description The longnose sucker is a moderately large, torpedo-shaped fish. The sucking mouth is toothless and located beneath its elongated snout. Colour in longnose suckers varies, but is typically dark olive or copper coloured along the head and back blending to creamy white along the belly. These fish typically weigh up to 1.5 kg.

Habitat Found within the clear, cold waters of the lakes and rivers of central and especially northern Saskatchewan, the native range of the longnose sucker actually extends northward through the Arctic and into Asia.

Spawning Longnose suckers spawn annually in early-spring preferring to migrate up feeder streams when present, but otherwise spawning within lake shallows. Spawning occurs in shallow, moderately flowing water over a coarse gravel to cobble bottom. The spawning act is repeated numerous times; broadcasting small numbers of tiny sticky eggs with each trial. No nest is prepared and the offspring, once hatched, must fend for themselves.

Feeding Longnose suckers feed entirely on invertebrates such as immature insects, freshwater shrimp, small clams and crustaceans collected from the water's bottom with their sucking mouth.

During the spring, the longnose sucker's copper colour often changes to a brilliant red and becomes very visible in northern rivers.

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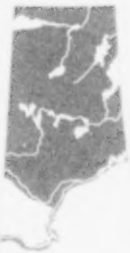

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Bigmouth buffalo *Ictiobus cyprinellus*

Distinguishing features
- Mouth at tip of snout, not below as in other suckers
- No whisker-like barbels present

Description Bigmouth buffalo are a stout, deep-bodied fish. They possess large scales, soft-rayed fins and are typically dark-brown to bronze in colour. They have large mouths and do not have the fleshy lips common to other suckers. Although often mistaken with common carp, bigmouth buffalo can be readily distinguished by the absence of whisker-like barbels surrounding the mouth.

Habitat Bigmouth buffalo are well adapted to the reservoirs of the Qu'Appelle River system which they inhabit. During summer months, they move into warm, shallow, protected bays in the upstream portions of the reservoirs and into deeper water in fall and winter. Saskatchewan is the furthest northwest limit of their native North American range.

Spawning Bigmouth buffalo spawn in late spring within tributary streams or flooded lake shores and marshes. Triggered by the onset of fresh, flowing water, females broadcast their eggs randomly over flooded vegetation within the shallows.

Feeding The long gill rakers within the bigmouth buffalo's mouth enable it to efficiently filter aquatic invertebrates from the mud and debris which it repeatedly inhales and exhales while feeding.

The largest of Saskatchewan's suckers, bigmouth buffalo can grow to lengths of 100 cm and weigh in excess of 25 kg.

Common carp *Cyprinus carpio*

Distinguishing features • A whisker-like barbel at each corner of the mouth • Toothless mouth

Description Carp are a stout and full-bodied fish with long snouts and small eyes. The dorsal and anal fins each possess a single, stout spine along the leading edge while the paired pectoral and pelvic fins are soft-rayed. Colouration is variable but generally tends toward olive-green along the head and back to yellowish on the belly. Saskatchewan carp commonly grow to weights of 10 to 15 kg.

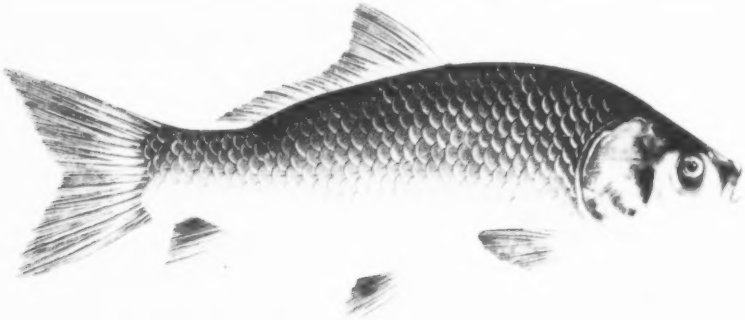
Habitat Carp prefer the shallow, warm, well-vegetated waters of mud or silt-bottomed rivers and reservoirs. They are extremely tolerant of high levels of turbidity and low dissolved oxygen concentrations, providing food supplies are not limited.

Spawning Carp are tremendously reproductive with a single female laying up to two million eggs. Spawning typically occurs in May and June within the warm, weedy shallows of river backwaters and lake margins.

Feeding Carp consume both plant and animal matter including aquatic insects, crustaceans, worms, molluscs and aquatic plants. In feeding, carp inhale and expel mouthfuls of bottom sediments, selecting only food items. Large numbers of carp feeding in a particular area tend to stir up the water, which makes it difficult for some other fish species to see and feed.

Carp were originally introduced to the eastern United States from Europe in the early 1800s and have since extended their range to include areas of southern and eastern Saskatchewan.

Bigmouth buffalo *Ictiobus cyprinellus*



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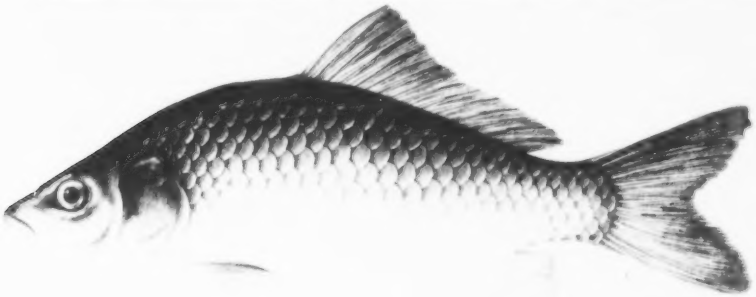

Distinguishing features - **A whisker-like barbel at each corner of the mouth - Toothless mouth**

Description **Carp are a stout and full-bodied fish with long snouts and small eyes. The dorsal and anal fins each possess a single, stout spine along the leading edge while the paired pectoral and pelvic fins are soft-rayed. Colouration is variable but generally tends toward olive-green along the head and back to yellowish on the belly. Saskatchewan carp commonly grow to weights of 10 to 15 kg.**

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Channel catfish *Ictalurus punctatus*

Distinguishing features
- Four pairs of barbels
- All fins soft-rayed, but dorsal and pectoral fins have stout spines

Description The channel cat is a stout, deep-bodied fish. Adults tend to be steel-blue to grey along the head and upper sides fading to a creamy-white abdomen. Juveniles tend to be pale blue to olive and are more spotted than the adult fish. Although an average adult size is about 2 to 4 kg, channel catfish can achieve weights of over 10 kg.

Habitat Channel catfish are very hearty fish, able to withstand both very high temperatures and low dissolved oxygen levels. They tend to favour cool, clear deeper areas amidst bottoms of gravel and rubble. Saskatchewan is the northwest extent of their native range.

Spawning Channel catfish spawn in late-spring or early summer. Prior to spawning, a nest is prepared by the male in a secluded area of semi-dark such as near a sunken log. The male remains with the eggs throughout their incubation, protecting both the eggs and later the larval fish from predators.

Feeding Young catfish tend to feed on insect larvae, crustaceans, molluscs and algae. Although older channel catfish will still feed on aquatic invertebrates, fish form the bulk of their diet. Specialized sensory organs called 'chemo-receptors' on the barbels of the channel catfish guide them to their food through a combined sense of smell and taste.

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Black bullhead *Ameiurus melas*

Distinguishing features • Non-jagged spine present on leading edge of pectoral fin

Description Bullheads are smaller and stockier than channel catfish and have only a slightly notched caudal fin. Black bullheads attain lengths of up to 20 cm while brown bullheads grow up to 35 cm in length. Of the two species of bullheads found within Saskatchewan, the black bullhead is more common than the brown.

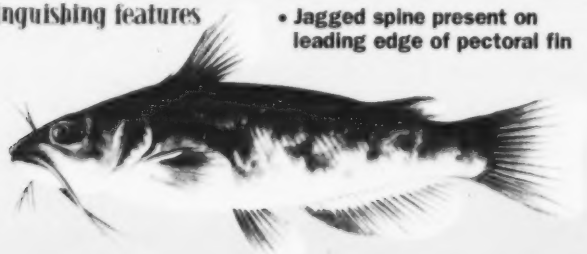
Habitat Preferred habitats for bullhead are turbid, slow-moving rivers, and both species are very tolerant of high water temperatures and pollutants. Saskatchewan is the northwestern limit of each species' native range.

Spawning Bullheads spawn in late May or June. Prior to spawning, a nest is constructed by one or both of the parents in a shallow muddy or sandy area often among submerged vegetation. When spawned, the eggs are fanned free of silts by the parents, ensuring the incubating eggs receive enough oxygen. Once hatched, the young fry will school closely about the guarding parent for several weeks until venturing out on their own.

Feeding Both species eat aquatic insect larvae, small crustaceans, crayfish, freshwater mussels and small fish. Specialized 'chemo-receptors' on their barbels enable bullheads to feed effectively in dark or murky water through a combined sense of taste and smell.

Brown bullhead *Ameiurus nebulosus*

Distinguishing features • Jagged spine present on leading edge of pectoral fin



Lake sturgeon *Acipenser fulvescens*

Distinguishing features
- Extendable tube-like mouth
- Four whisker-like barbels
- Five rows of bony plates called 'scutes'

Description Sturgeon possess large, heavy, torpedo-shaped bodies. Four barbels that aid in feeding are found in front of the large toothless sucker-like mouth. All fins are soft-rayed. The skin of the lake sturgeon is tough and lacks real scales. In Saskatchewan, sturgeon range in size from 4.5 to 36 kg but have attained sizes of 123 kg.

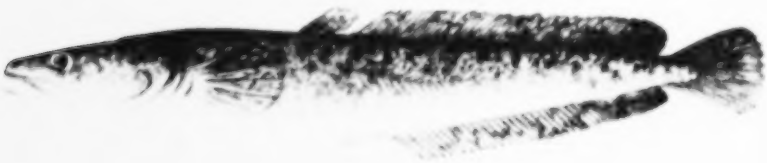
Habitat Generally, sturgeon prefer the productive shoal areas of large rivers at depths between 5 to 10 m. Although not well documented, it appears sturgeon tend to shift seasonally between shallow and deep waters to avoid high water temperatures.

Spawning Spawning generally occurs from early-May to late-June. Sturgeon can migrate 400 km or more to locate suitable spawning areas. Spawning generally occurs in the swift water of rapids or at the base of waterfalls and usually at a depth of 1 to 5 meters. Sturgeon do not spawn annually; on average, male and female sturgeon probably spawn once every five years.

Feeding Sturgeon feed by extending their tube-like mouth into the mud or gravelly-mud bottom and filtering out such food items as crayfish, molluscs, insect larvae, leeches, aquatic invertebrates and the occasional small fish. The four barbels located immediately in front of the mouth greatly enhance the sturgeon's ability to detect the presence of food.

Lake sturgeon have been around for some 200 million years, making it the oldest living creature on earth. Sturgeon populations are remnant of once was, due to the degraded quality of river environments and over fishing.

Burbot *Lota lota*



Distinguishing features
- **Single whisker-like barbel beneath tip of chin**
- **Small, thin scales that appear like skin**

Description **The burbot's broad, flattened head and narrow, eel-like body quickly distinguishes it from other fish species. Also distinctive, is the burbot's single whisker-like barbel that extends below its chin. Their overall colour is tan or brown overlain by a darker 'lace-like' pattern creating a camouflaged appearance.**

Habitat **Burbot are found throughout Saskatchewan in large, cool rivers and more commonly in deep-water lakes. Throughout the summer months they remain in cooler deeper water but will move into shallower water at night to feed.**

Spawning **The burbot is the only Saskatchewan fish species that spawns in midwinter, beneath the ice. Burbot are mass-spawners, meaning that during the spawning act a group of 10 to 12 male and female burbot gather over gravelly, near-shore shoals or shallow, sandy areas. The resultant fertilized eggs settle to the bottom to incubate. This spawning occurs only at night with females producing 40,000 to 1.3 million eggs depending on their size.**

Feeding **Peak feeding activity for these ferocious predators occurs at night. Prey preferences shift from aquatic insects and crayfish as juveniles to being almost exclusively fish-eaters as adults.**

Commonly called 'ling' or 'mariah', this native fish is the only true freshwater member of the cod family.

Lake sturgeon *Acipenser fulvescens*

Distinguishing features
- Extendable tube-like mouth
- Four whisker-like barbels
- Five rows of bony plates called 'scutes'

Description Sturgeon possess large, heavy, torpedo-shaped bodies. Four barbels that aid in feeding are found in front of the large toothless sucker-like mouth. All fins are soft-rayed. The skin of the lake sturgeon is tough and lacks real scales. In Saskatchewan, sturgeon range in size from 4.5 to 36 kg but have attained sizes of 123 kg.

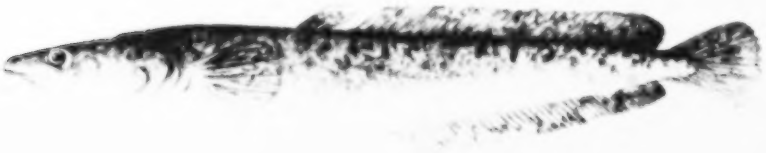
Habitat Generally, sturgeon prefer the productive shoal areas of large rivers at depths between 5 to 10 m. Although not well documented, it appears sturgeon tend to shift seasonally between shallow and deep waters to avoid high water temperatures.

Spawning Spawning generally occurs from early-May to late-June. Sturgeon can migrate 400 km or more to locate suitable spawning areas. Spawning generally occurs in the swift water of rapids or at the base of waterfalls and usually at a depth of 1 to 5 meters. Sturgeon do not spawn annually; on average, male and female sturgeon probably spawn once every five years.

Feeding Sturgeon feed by extending their tube-like mouth into the mud or gravelly-mud bottom and filtering out such food items as crayfish, molluscs, insect larvae, leeches, aquatic invertebrates and the occasional small fish. The four barbels located immediately in front of the mouth greatly enhance the sturgeon's ability to detect the presence of food.

Lake sturgeon have been around for some 200 million years, making it the oldest living creature on earth. Sturgeon populations are remnant of once was, due to the degraded quality of river environments and over fishing.

Burbot *Lota lota*



Distinguishing features
- **Single whisker-like barbel beneath tip of chin**
- **Small, thin scales that appear like skin**

Description **The burbot's broad, flattened head and narrow, eel-like body quickly distinguishes it from other fish species. Also distinctive, is the burbot's single whisker-like barbel that extends below its chin. Their overall colour is tan or brown overlain by a darker 'lace-like' pattern creating a camouflaged appearance.**

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Commonly called 'ling' or 'mariah', this native fish is the only true freshwater member of the cod family.

Smallmouth bass *Micropterus dolomieu*

Distinguishing features
- Maxillary extends to below the centre of the eye
- Eight to 15 vertical bars along the flank

Description The smallmouth bass is a moderately large and deep-bodied fish, with two joined dorsal fins- the first being spiny-rayed and the second, soft-rayed. Overall colouration is typically golden-brown to olive-green along the head, with back and flanks blending to creamy-white on the belly. Due to the position of the maxillary, the smallmouth has a smaller gape size than the largemouth bass.

Habitat Smallmouth bass are currently managed in a limited number of small, landlocked lakes across the south and east-central areas of the province. Smallmouth tend to favour shallow, rocky near-shore areas during spring and fall but will seek out progressively deeper water as water temperatures warm in summer.

Spawning Spawning occurs annually between late-May and early-July. Males construct near-shore nests in the sand or gravelly substrate often amid rock or woody debris. Spawning occurs immediately above the nest. Following spawning, the male will remain on the nest protecting both the incubating eggs and later the young fry from being covered by silt and from predators. Females will typically average approximately 15,000 eggs per kg of weight.

Feeding Crayfish generally represent the largest part of the adult smallmouth's diet. Small fish (especially yellow perch) and invertebrates such as aquatic insects, leeches or freshwater shrimp are important to the diet but consumed to a lesser degree.

The smallmouth, largemouth and rock bass are all members of the sunfish family and are characterized by their two joined dorsal fins, making them appear as one larger fin.

Largemouth bass *Micropterus salmoides*

Distinguishing features • Maxillary extends to below or past the far margin of the eye

Description The largemouth bass is a relatively large and stout fish. They possess two, joined dorsal fins the first being spiny-rayed and the second, soft-rayed. The head and back of this species is typically bright green to olive in colour. Flanks are golden-green blending into a milky-white belly. A dark lateral band is present extending from behind the gill cover to the caudal fin but often becomes broken or not as visible in adults.

Habitat Largemouth bass are only found in Boundary Reservoir in the far southeastern corner of Saskatchewan. They will typically inhabit the warm, upper levels of small, shallow lakes or the shallow bays of larger lakes. They are almost universally associated with heavily vegetated, soft-bottomed areas and unlike the smallmouth are rarely found in rocky areas.

Spawning Largemouth bass spawn annually in early to mid-June. Prior to spawning a nest is prepared by the male in the soft, muddy near-shore substrate. Following the spawning act, the male remains on the nest fanning the incubating eggs free from silt and guarding them against predation. The male will continue to protect the offspring for up to a month at which time they will desert the nest to feed independently.

Feeding Largemouth will often feed in schools in well-vegetated near-shore areas. Although primarily a fish-eater, largemouth also prey on insects, crayfish and frogs.

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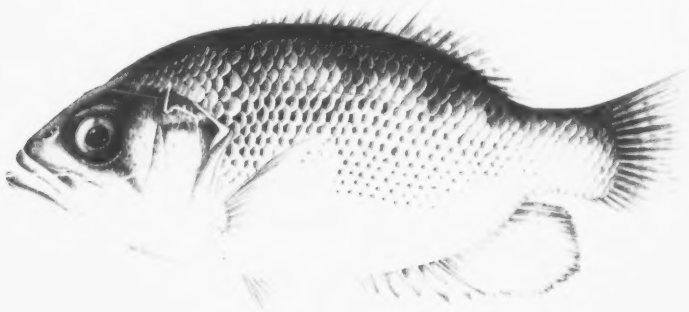
Rock bass *Ambloplites rupestris*



Distinguishing features
- Six spines on anal fin
- Eye is orange to bright red in colour
- Scales along flank have distinctive black spots

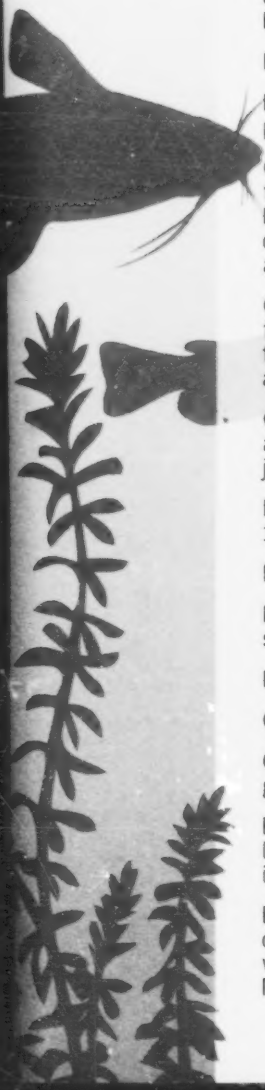
Description This small, slim, deep-bodied fish is the only species from the sunfish family native to Saskatchewan. The rock bass has two dorsal fins - the first, spiny-rayed and the second, soft-rayed. As in all basses, the dorsal fins are connected. Sometimes referred to as 'red-eye', the large eyes of this fish vary in colour from orange to bright red. Several 'saddle' marks or blotches are present along the back and upper flanks. Rock bass generally grow to a size of 12.5 to 17.5 cm and rarely exceed 225 g in weight.

Habitat Although common throughout much of the east-central United States, rock bass are presently found only in the Assiniboine and Qu'Appelle Rivers in Saskatchewan. As their name suggests, rock bass can be typically found schooling around rocky areas in the shallows of lakes and in the lower, warmer reaches of rivers.

Spawning Spawning generally occurs in June. Prior to spawning, the male will prepare a shallow nest in the bottom substrate. Nests may contain eggs from more than one female and females may spawn in more than one nest. Eggs are brooded by the male. During incubation, males will very aggressively defend their nests.

Feeding Aquatic insects, minnows, yellow perch and crayfish form the bulk of the rock bass' diet. The size of prey items increases throughout the life of the rock bass in proportion to its own body size.

Glossary of Terms



Aquaculture – the science, art and business of cultivating marine or freshwater food fish or shellfish, under controlled conditions

Aquatic Invertebrates – animals that spend part or all of their life cycle in water and lack a backbone, such as leeches, crayfish and shrimp

Broadcast – to spawn over a large area

Brooded – to sit on or hatch, to guard eggs, to protect young

Chars or Charrs – a subspecies of the trout family, characterized by light spots on a dark background, instead of the traditional trout colouring of dark spots on a light background. They also show a white leading edge on their lower fins.

Chemo-receptors – specialized sensory organs found on the barbels of fish that are used to guide the fish to its food through both the sense of smell and taste

Crustaceans – creatures characterized by having a hard outer skeleton, segmented body and paired jointed limbs (eg.) crayfish and shrimp

Fingerlings – a young 'finger-sized' fish less than 1 year old

Flanks – the sides of a fish

Forage Fish – species of fish predominantly selected by larger fish as prey

Fry – a recently hatched fish; larval fish

Gape – width of the mouth opening

Gill rakers – spine-like structures attached to the gills that aid in collecting food

Habitat – the place or area where an organism lives or can most commonly be found and on which it depends for food, shelter and spawning

Hatchery – a 'nursery' for fish, where they are cultured and raised in order to be released into the wild. Saskatchewan's fish hatchery is located in Fort Qu'Appelle

Glossary of Terms

Hybrid – a combination of two species of fish that are bred to form a new variety of fish

Incubate – the stage of reproduction that allows a fish egg to develop into a young fish

Larvae (larval) – the immature stage of an animal that must undergo a change of appearance before becoming an adult

Milt – sperm-filled fluid released by male fish

Native – naturally existing in an area

Panfish – generally used to refer to sportfish species that attain a small upper size (0.45 – 0.9 kg) (eg.) Perch, Rock bass, Brook trout

Plankton – tiny aquatic organisms floating or drifting in the water; food source for young fish

Redd – a shallow depression of gravel created by the a fish to hold eggs; a nest

Riffle – a shallow, gravelly streambed with a swift current

Shoal – a shallow place in a body of water, usually a sandy or rocky area

Spawning – the reproductive act; to deposit eggs; produce offspring in large numbers

Substrate – the bottom materials of a lake, stream or river; it can be sandy, silty, rocky or gravelly

Thermocline – an area within the water column of a lake that separates the upper warmer water from the cooler deeper depths

Tributary streams – smaller streams that empty into a larger stream, river or body of water

Turbid or Turbidity – turbid waters are waters that are cloudy due to large amounts of particles suspended in them. Turbidity is the amount of particles suspended in the water.

Zooplankton – small aquatic animals barely visible to the naked eye; an important food item to many larval fish

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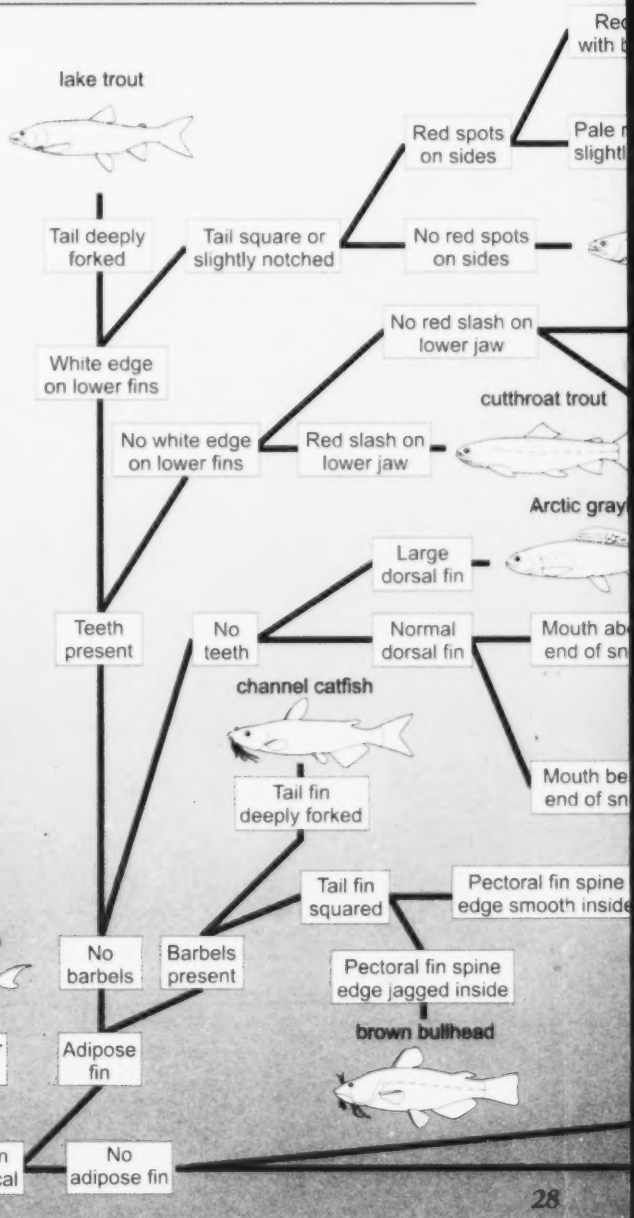
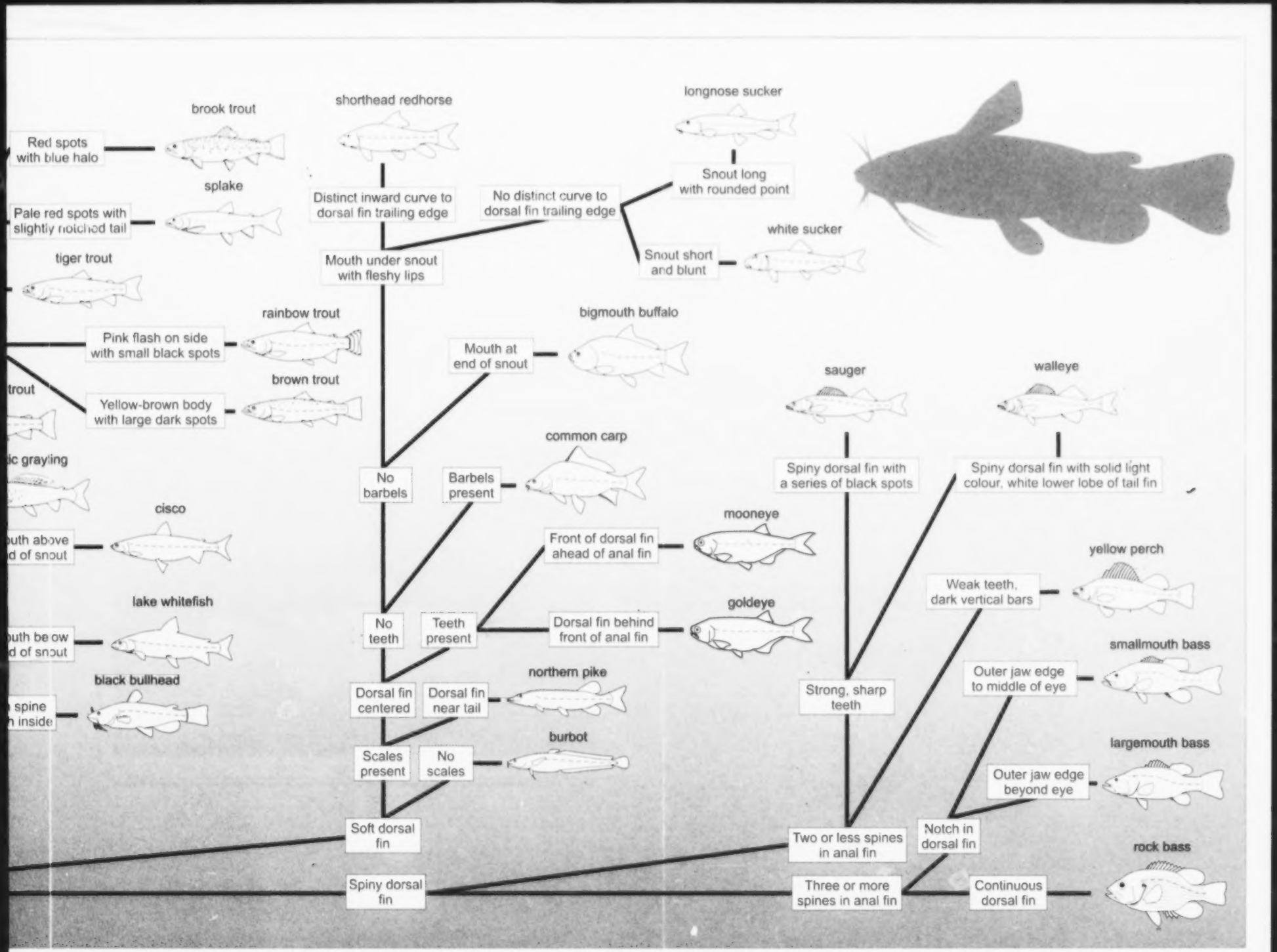
Key to Saskatchewan's Fish Species

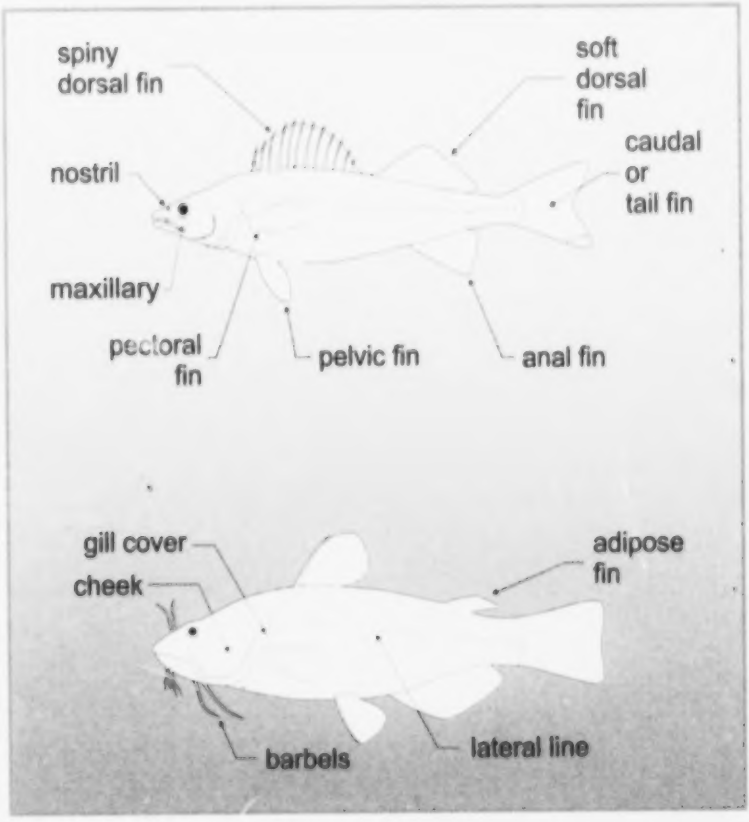
Use this key and the Identifying Features illustration as a tool to help you distinguish between any of the fish species found in this booklet. Keys work by making a series of alternative choices. Within each of the boxes is an identifying feature that will help you make a choice as to which characteristic best describes your species of fish.

Start in the lower left-hand corner and examine the first two boxes in the key. Determine which one best describes your specimen and follow the fork in the key to your next alternative choice. Continue this process until you have reached the illustration and name of your fish specimen.




brook trout
Red spots with blue halo
splake
Pale red spots with slightly notched tail
tiger trout
rainbow trout
Pink flash on side with small black spots
brown trout
Yellow-brown body with large dark spots
shorthead redhorse
Distinct inward curve to dorsal fin trailing edge
longnose sucker
No distinct curve to dorsal fin trailing edge
Snout long with rounded point
white sucker
Snout short and blunt
Mouth under snout with fleshy lips
bigmouth buffalo
Mouth at end of snout
common carp
No barbels
Barbels present
cisco
lake whitefish
black bullhead
mooneye
Front of dorsal fin ahead of anal fin
goldeye
Dorsal fin behind front of anal fin
No teeth
Teeth present
northern pike
Dorsal fin centered
Dorsal fin near tail
burbot
Scales present
No scales
Soft dorsal fin
Spiny dorsal fin
sauger
walleye
Spiny dorsal fin with a series of black spots
Spiny dorsal fin with solid light colour, white lower lobe of tail fin
yellow perch
Weak teeth, dark vertical bars
smallmouth bass
Outer jaw edge to middle of eye
Strong, sharp teeth
largemouth bass
Outer jaw edge beyond eye
Notch in dorsal fin
Two or less spines in anal fin
rock bass
Three or more spines in anal fin
Continuous dorsal fin

Identifying features of fish



Saskatchewan
Watershed
Authority
Saskatchewan
Environment
Fish and Wildlife
Development Fund
Saskatchewan
Our Future is Wide Open